EFFECTIVENESS OF A GUIDED WILDERNESS EXPERIENCE ON IMPROVED CLIENT SELF-ESTEEM, SELF-EFFICACY, ANXIETY, AND DEPRESSION

by

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STATEMENT OF THESIS APPROVAL

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ABSTRACT

This study utilizes the self-efficacy theory to explore its role in the effectiveness of a guided wilderness experience on improved client self esteem, self-efficacy, anxiety, and depression. Data were gathered from self-administer surveys provided to students from the University of Utah participating in Academic rock and ice climbing courses (N = 40). Comparisons for each of the four categories were performed on different demographic groups distinguished on the basis of gender, prior wilderness experience and fitness level. Results showed a significant correlation between the guided wilderness experiences and a client's self esteem among all three demographic traits. Support for use of the self-efficacy theory is presented. Also presented are results that support the implementation of a guided wilderness experience as a method for improving a client's mental state.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Purpose of the Research Study

The purpose of this study is to examine the impact of an experiential wilderness guided program as part of the University of Utah's Department of Parks, Recreation and Tourism's outdoor courses on improvements in self-esteem, self-efficacy, anxiety and depression. This research is needed because there is a dearth of research on this type of activity. A literature review found only a few studies of the impact of an outdoor experience as part of freshman orientation and many of these were from the 1970s and 1980s (Bertolami, 1981; Ewert, 1977; Gass, 1987, 1991; Strogner, 1978) although there are additional publications of outcomes relating to outdoor recreation as a method of improving the mental, psychological or spiritual health of an individual (Gray & Patterson, 1994).

Structure of the Thesis Chapters

Chapter 1 is a report on the background and significance of this study by providing a literature review suggesting the need to better understand the psychological impacts of wilderness programs on college students.

Chapter 2 reports the major outcomes of the intervention by the two main research questions regarding the effectiveness of the wilderness program, using prospectively collected pre- and posttests.

Chapter 3 summarizes the results of the study and highlights major findings, limitations, implications, and recommendations for the future.

Literature Review

It is understood that within America there are hundreds of recreational based programs that make use of wilderness (Friese, 1995). The literature review revealed multiple studies relating to wilderness therapy programs with a targeted population of troubled youth or aggressive individuals. Only these few dated studies mentioned above were found focusing on college-age populations and the effects of a guided outdoor based intervention embedded within a college freshman orientation with measureable results relating to mental health.

Outdoor activities as part of a college trip, outing, or course have likely additional benefits in decreasing freshman drop-out and increasing graduation rates. For this reason, a number of universities and colleges, such as Princeton University (Curtis, 1999) and the University of New Hampshire (Gass, 1990) have developed large freshman outdoor experiences as part of their freshman orientation. The University of Utah is hoping to expand their student outdoor experience program by determining the impact of the experience on the participants. Additionally, such research on mental and physical health benefits of outdoor experiences could help to reduce the high health care costs in this nation. Exposure in college to outdoor activities, such as hiking, camping, backpacking, river running and rock climbing, could help a student adopt a healthier and more activity oriented lifestyle for life. Projections of American outdoor recreation growth into the year 2050 yield higher rates than our anticipated population growth (Bowker, 1999). It has become understood that outdoor recreation is a well practiced pursuit for our population. Guided outdoor endeavors such as rock climbing and ice climbing may produce measurable results of their positive effect on the college age population and ultimately

lead to a more activity oriented lifestyle for life. It is with this study that we intend to show validity to this belief.

Underlying Behavior Change Theories

Theoretical framework is necessary in developing the assessment, implementation and evaluation of health promotion and education interventions. Behavioral change is associated with the acquisition or elimination of a behavior. Due to its complexity, it is rarely a discrete event. Researchers exploring the psychological status and behavioral change relative to wilderness programs have utilized various models and theories including the Social Cognitive Behavior Theory (Bandura, 2001). This section will review a part of the Social Cognitive Theory, the Self-Efficacy Theory, that we hypothesize is operational in promoting positive behavioral change in this wilderness experiential program.

In 1977, Albert Bandura and colleagues proposed that self-efficacy is among the most important behavioral change prerequisites. Bandura defined self-efficacy as people's beliefs about their capabilities to produce designated levels of performance that exercise influences over events that affect their lives (Bandura, 2001). It was also during this time that the self-efficacy theory became part of the evolution of the Social Cognitive Behavioral Theory (Bandura, 2001).

Many health behaviors have been affected by the theoretical constructs of self-efficacy. Known examples include engagement in eight healthy dietary practices among office staff and healthy food choices among a group of third- and fourth-grade students (Glanz, 2002). Extreme sports, such as rock climbing, that are recreational based are

highly influenced by mastery of attempts and thus also are argued to be explained by self-efficacy (Gomez, 2007).

Throughout the development of the self-efficacy theory, four specific modalities have been determined as part of its nature. These include mastery experience, vicarious experience, verbal persuasion, and physiological states (Gomez, 2007). Of these the mastery experience is said to be the most important. When relating self-efficacy to a behavior such as rock climbing or ice climbing, it becomes obvious that mastery of the experience or performance accomplishment is strongly related.

When individuals are taught a new skill or given the opportunity to attempt a new task, they possess a level of self-efficacy. Their current belief is limited by factors such as prior experience, associated fears, unknown information, etc. Health educators have found that by breaking a new skill or tasks into smaller steps, increased success is generated (Glanz, 2002). By simplifying each step and allowing for more repetitions of practice, an individual is able to build more self-efficacy about performing each step. Additionally, the facilitator or health educator is able to provide positive reinforcement and perform additional role modeling which also aids in increasing the individuals self-efficacy. This similar situation exists among professional outdoor guides and their clients.

The self-efficacy theory appears the better of the health behavior theories when relating to my chosen area of interest. To date little research has been performed or been made available concerning guided outdoor recreational activities and the use of the self-efficacy theory.

Specific Aims

Aim #1: To conduct a prospective pretest to posttest analysis of the short-term effectiveness of the experiential wilderness program by conducting survey research and comparing self-reported clinical record outcomes of approximately 40 clients. Outcomes will include:

(1) Psychological change regarding self-esteem and self-efficacy

(2) Psychological change regarding anxiety and depression

The research methodology, results, discussion and conclusions of this study are presented in Chapter 2 or the principlal outcome study article.

Secondary Aim

Aim #2: To collect survey data on client satisfaction, ideas for program improvement, attendance or dosage by client, as well as demographic information.

Research Questions and Hypotheses

(1) How did participation in the experiential wilderness program impact the immediate posttest outcomes related to the client's self-esteem as measured by the Rosenberg Self Esteem Scale (Rosenberg, M., 1965)?

H_o: Participation in the experiential wilderness program is not associated with change in the participant's self-esteem.

H_a: Participation in experiential wilderness program is positively associated with greater improvements in self-esteem.

(2) How did participation in the experiential wilderness program impact the immediate posttest outcomes related to the client's self-efficacy as measured by an internally generated instrument?

H_o: Participation in the experiential wilderness program is not associated with change in the participant's self-efficacy.

H_a: Participation in experiential wilderness program is positively associated with greater improvements in self-efficacy.

(3) How did participation in the experiential wilderness program impact the client's immediate posttest outcomes related to the client's anxiety as measured by the Hospital Anxiety and Depression Scale (Zigmond AS, 1983)?

H_o: Participation in the experiential wilderness program is not associated with change in the participant's anxiety level.

H_a: Participation in experiential wilderness program is positively associated with greater improvements in anxiety level as measured.

(4) How did participation in the experiential wilderness program impact the immediate posttest outcomes related to the client's depression as measured by the Hospital Anxiety and Depression Scale (Zigmond AS, 1983)?

H_o: Participation in the experiential wilderness program is not associated with change in the participant's depression level.

H_a: Participation in experiential wilderness program is positively associated with greater improvements in depression level.

Research Methods

Design

A repeated measures pre- and posttest quasi-experimental 2 group post-hoc subgroup design was used (Campbell & Stanley, 1966). This 2 x 2 ANOVA design was used to address the research questions concerning which types of clients improved the most from the intervention. The two groups to be compared were defined by demographic categories of gender, and mean splits on continuous variables such as prior wilderness experience, and fitness. The diagram of the design is provided in Figure 1.1.

Study Limitations

The limitations with using a quasi-experimental posthoc statistical research design and the study methods utilized with this study are listed below. Many of these study limitations were not addressed due to the practicalities of conducting this research within the time constraints and using a quasi-experimental prospective study design as compared to a true experimental randomized control design which is the only experimental design that controls for almost all threats to the validity of the outcomes.

Group #1 (males, high risk, etc):	**O**	**X**	**O**
Group #2 (females, low risk, etc):	**O**	**X**	**O**

Figure 1.1: Posthoc Statistical Subgroup Design

Experimental Design Limitations in Internal Validity

A large limitation of this study is the lack of a true experimental randomized control design. This would control for most if not all threats to internal validity of the results.

The actual design for this study was a prospective pretest and posttest design; however, the comparison groups were constructed posthoc to address the questions concerning which types of clients improved the most from the wilderness intervention. In order to improve on the design flaws of a nonexperimental single experimental intervention group design, we turned the nonexperimental design into a quasi-experimental posthoc statistical design by proposing research questions of the impact of the program on different types of clients. In this way we compared the program outcomes for several types of groups of clients as defined above by demographic categorical variables such as gender, age, or continuous variables hypothesized to impact outcomes such as those with higher levels of prior wilderness experience to those as lower levels and those at high risk for mental health problems such as anxiety and depression to those at low risk.

The rigor of a research study is the ability to measure what actually happened during the study and is directly influenced by internal validity (Valente, 2002). Limitations of internal validity directly related to the use of a quasiexperimental correlational Ex Post Facto design, sometimes called a posthoc statistical design in that it does not control for selection bias (since participants were different on risk level), statistical regression to the mean (high risk will likely improve more naturally), and possibly selection maturation (differential rates of change in the groups).

The controlled threats to internal validity are greatly improved by this quasi-experiment design and analysis. Threats including history, maturation, testing, instrumentation, placebo, diffusion, Hawthorne effect, location, and implementation are now controlled. The nonexperimental prepost only design controls for selection and mortality threats to internal validity of the outcome results only. Each of these threats to the internal validity of the study results is discussed below (Campbell & Stanley, 1963).

History. Since the participants in both groups participated in the wilderness program during the same period of time, the impact of differential historical impact on the outcomes is controlled for in the quasi-experimental design, but not in the nonexperimental design. The passage of time with important historical events that effect most people equally may influence outcomes of the study and lead to inaccurate results (Creswell, 2002). Study participants may have made changes in anxiety and depression because of any number of historical events (e.g., their favorite sports team won, community wide media campaigns stressing increased physical activity, natural disasters that increase depression or reduce a population's mobility and activity, news events such as the Olympics that could encourage people to get involved in outdoor athletic events, etc.) and not specifically related to participation in the wilderness program.

Maturation. Since participants are studied over the same amount of time in both groups this natural change in reductions in depression and anxiety is controlled for in the quasi-experimental design but not the nonexperimental main effects design.

Testing. This threat to internal validity of a testing effect is controlled for by the fact that both the experimental and control groups received the pretest.

Instrumentation. This threat was controlled because both groups received the same prepost questionnaire. We also selected standardized and well used instruments with high alpha reliability and validity to match the outcome variables so as to maximize content or construct validity. Only the specific instrument used to measure self-efficacy in climbing or wilderness experiences was internally generated since no standardized test could be located. In any case, the quasi-experimental design assures that both groups share equivalent bias from instrumentation since all participants received the same test instrument.

Placebo. This threat involves improvement due to real or perceived expectation rather than the treatment or intervention, and can occur when the participants receive a treatment they believe likely to be beneficial. This threat is controlled for because all participants received the same treatment and were tested during the same time period.

Diffusion of treatment. This threat is when one group becomes aware of information or an intervention and influences practices meant for another group. This threat is controlled for with the use of one primary group of participants in the study and not two separate groups.

Hawthorne effect. This threat is the effect of being studied upon the participants being studied in that they may act or respond differently. This is controlled for with the use of the posthoc subgroup pre/post design because both groups participated in the program.

Location. The impact on the threat of location is controlled because all participants received the questionnaires under the same conditions.

Implementation. This threat is the potential effect of differing methods of intervention implementation. This threat is controlled because the same participants were studied in the same time period.

Selection bias. This threat was not controlled for because all the participants in this study were at different risk levels exhibiting important differences such as number of risk factors for depression and anxiety and prior experience with the wilderness.

Selection maturation effect. This threat arises with differential rates of normal growth between pretest and posttests for the different groups. This threat is not controlled for with the quasi-experimental design.

Statistical regression to the mean. This threat was not controlled for because participants with high risk for depression and anxiety may likely improve naturally and scores from these individuals will naturally regress more towards the mean.

Threats to External Validity or Generalization Threats

Selection/treatment interaction. The results can probably be generalized to other groups of similar participants only but not to a different study population that is ethnically or educationally vastly different. The participants of the wilderness program included in this study were primarily educated, Caucasian men and women between the ages of 18-25 who displayed self-motivation for behavior/lifestyle change and who voluntarily participated in the program. Because of the highly motivated and nearly homogenous sample, external validity or generalization of the results to populations of differing ethnicities, varying age groups and less educated populations may be questioned.

Setting/treatment interaction. This threat was not controlled for because participants may not do as well at a different location or with different implementers. This threat would have to be tested in later replication studies.

History/treatment interaction. This threat is controlled for by limiting the generalization of the results of this study to the specific time period of July 2009 through February 2010. All participants in the study were participants in that same time period.

Conclusion

Evaluation research is crucial to determine effectiveness, impact and client satisfaction of wilderness programs for college students. Currently, there is a lack of evaluation research of wilderness programs reporting effectiveness and impact over time particularly for college students. Impact on college retention and grades would be a nice future study. Whereas the University of Utah Wilderness Program has never been evaluated for effectiveness, impact and client satisfaction, this research provides an important contribution for program improvements, future research funding and dissemination of outcome and process evaluation results to other outdoor wilderness programs in colleges and universities. It will hopefully support the psychological benefits of outdoor experiences.

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CHAPTER 2

OUTCOMES OF A TWO DAY GUIDED CLIMBING INTERVENTION

Abstract

This study utilizes the self-efficacy theory to explore the role it plays in the effectiveness of a guided wilderness experience on improved client self-esteem, self-efficacy, anxiety, and depression. Data were gathered from self-administered surveys provided to students from the University of Utah participating in academic rock and ice climbing courses (N = 40). Comparisons for each of the four categories were performed on different demographic traits including gender, prior wilderness experience and fitness level. Significant results were produced showing a correlation between the guided wilderness experience and improving a client's self-esteem among all three demographic traits. A discussion of the study including support for using the self-efficacy theory is visited. Also, an overview of how the results support the implementation of guided wilderness experiences as a method for improving a client's mental state follows.

Background and Significance

The purpose of this study is to examine the impact of an experiential wilderness guided program as part of the University of Utah's Department of Parks, Recreation & Tourisms outdoor courses on improvements in self-esteem, self-efficacy, anxiety, and depression. This research is needed because there is a dearth of research on this type of activity. A literature review found only a few studies of the impact of an outdoor experience as part of freshman orientation and many of these were from the 1970s and 1980s (Bertolami, 1981; Ewert, 1977; Gass, 1987, 1991; Strogner, 1978) although there are additional publications of outcomes relating to outdoor recreation as a method of improving the mental, psychological or spiritual health of an individual (Gray & Patterson, 1994).

It is understood that within America there are hundreds of recreational based programs that make use of wilderness (Friese, 1995). The literature review revealed multiple studies relating to wilderness therapy programs with a targeted population of troubled youth or aggressive individuals. Only these few dated studies mentioned above were found focusing on college-age populations.

Outdoor activities as part of a college trip, outing, or course have likely additional benefits in decreasing freshman drop-out and increasing graduation rates. The University of Utah is hoping to expand their student outdoor experience program by determining the impact of the experience on the participants. Additionally, such research on mental and physical health benefits of outdoor experiences could help to reduce the high health care costs in this nation. Exposure in college to outdoor activities, such as hiking, camping, backpacking, river running and rock climbing, have been known to help a student to adopt a healthier and more activity oriented lifestyle for life. Guided outdoor endeavors such as rock climbing and ice climbing may produce measurable results of their positive effect on the college age population. It is with this study that we intend to show validity to this belief.

Purpose of Study

Technical climbing pursuits such as vertical rock climbing or ice climbing have often been sought by individuals interested in the sport or in their desire to push beyond their typical comfort levels. Professional climbing guides have sometimes been used to help facilitate this pursuit and manage the risk associated. This study seeks to evaluate

the immediate outcomes of a wilderness course on changes in the client's self-esteem, self-efficacy, anxiety, and depression.

Methods

The evaluation design proposed for this study is a 2X2 quasi-experimental design with repeated measures including a pre- and posttest. There is no control group associated with this study and random assignment of the 40 enrolled participants will not take place. Rather students will register for activities based on a first come, first serve basis as sorted by the University's registrar's office. However, posthoc statistical comparisons will be made to compare multiple groups to determine if there are differences in outcomes by gender, prior experience in wilderness activities, and fitness levels. This type of analysis also creates comparison groups that make the study a quasi-experimental study rather than a nonexperimental study and controls for more threats to internal validity.

This study will use pretest and posttest survey instruments as the measuring technique for the hypothesized outcomes. The guided outdoor interventions have been implemented in prior years. Two different outdoor experiences including rock climbing and ice climbing will take place allowing for a slightly larger sample size and better comparison.

Participants will be required to attend a planning meeting to discuss the logistics associated with their specific outings. During this meeting, an introduction of the guides will be made. The participants will be considered clients of the guides and assigned to their respective guides at this time. Expectations of the outings will be discussed along with an overview of the itineraries. Required equipment will also be explained and an

equipment list will be provided. All field session plans will be finalized and agreed upon during this meeting.

Program Implementation

Forty participants per registration will be screened through the Parks, Recreation and Tourism Department (PRT) outdoor courses using the PRT registration and medical forms, to participate in an outdoor intervention during the time period of July 1, 2009 through February 28, 2010. The appropriate Institutional Review Board (IRB) consent forms must be completed to participate in this research study. Approval of acceptance as a participant must be obtained by the principal investigator. The consent form and pretest will be completed at the start of the field session. The posttest will be completed at the end of the field session. Participants not wishing to participate in the research will be able to participate in the outdoor activities with no penalty and this will be explained in the recruitment letter for the study.

Process Evaluation

The clients will rate their satisfaction with the outdoor experiences and with their guides including suggestions for improvements using an evaluation tool designed and implemented by PRT. These process outcome measures will be conducted immediately after the field session separate from the posttest.

Outcome Evaluation

The outcome evaluation will include a single-page 13-item demographic questionnaire and four standardized measures each put together into a single two-page

testing battery. A pretest will be completed at the start of the field session and a posttest at the end. Each student will be assigned a unique code number upon proper completion of the IRB approved consent form. This code number will be listed on all remaining materials to assure confidentiality during the study. Only the principal investigator will have access to the lists of names of the student enrollees and their unique code numbers. This list will be kept in a locked file cabinet or password protected computer to protect confidentiality of the participant's answers.

Outcome Measures

The pretest and posttest measurement testing battery was created using the several short standardized measures used frequently in the research literature and matching the hypothesized client outcome improvements, namely the 9-item Rosenberg Self-Esteem Scale (Rosenberg, 1965), 14-item Hospital Anxiety and Depression Scale (Zigmond AS, 1983), and an 6-item Outdoor Recreation Self-Efficacy Scale. Scoring of these tests will be done as determined by each testing instrument. Participants will complete each test alone as considered self reported data.

Results

Descriptive Statistics

A total of 40 surveys were collected. Of the participants 55% were male. The age range was 18 to 25 years with an average of 21.625 years. Participant's primary ethnicity was 95% Caucasian and 5% Asian. Participants were generally well educated with 72.5% having some college, 25% having a college degree, and 2.5% having some postgraduate schooling. The highest percentage of participants (30%) claimed an average family yearly

income of $100,000 and above. Of participants 85% were single while 10% were married and 5% divorced. 2.5%. Of participants 2.5% listed having at least one child. The majority of the participants listed English (87.5%) as their primary language while Tongan (2.5%) and other (10%) were listed. In the past 2 years 50% of participants had been involved in less than 150 days of outdoor activities. Of participants 52.5% rated their physical fitness as low while the remaining rated theirs high.

Inferential Statistics

All analyses were performed using an alpha of .05 as our criterion. Prior to statistical analysis, the appropriate scoring techniques were employed for both the Hospital Anxiety and Depression Scale (Zigmond, 1983) and also the Rosenberg Self-Esteem Scale (Rosenberg, 1965) when compiling results of the pre- and posttesting battery.

Gender pretest to posttest intervention outcome analysis. Gender comparison shown in Table 2.1 yielded a marginal significance for males (p = .07) and a significant increase for females (p = .02) concerning self-esteem. Gender and self-efficacy were neither significant for males (p = .43) nor females (p = .28). Anxiety levels did not show a positive significance for males (p = .43) but did show a marginal significance for females (p = .06). As with anxiety, depression levels were not significantly positive for males (p = .93) but were with females (p = .01).

The effect sizes as measured by Cohen's d were of medium size for the females, but small for the males. The positive improvements in depression in the females as the largest improvement after the outdoor experience (d = .32), followed by self-esteem (d =

Table 2.1: Pre- to Posttest Intervention Gender Outcomes

Scale Name	Sample	Pre-Test	*SD*	Post-Test	*SD*	Change	*F*	Sig	Effect Size d	ES d'
Self-Esteem							0.21	0.65	0.01	0.15
Male	22	20.68	4.11	21.95	3.99	1.27	3.52	0.07	0.14	0.82
Female	18	20.17	3.96	21.89	3.86	1.72	6.41	0.02	0.27	1.23
Self-Efficacy							1.79	0.19	0.04	0.43
Male	22	19.55	5.54	18.64	6.21	0.91	0.64	0.43	0.03	0.35
Female	18	17.83	5.02	19.11	5.99	1.28	1.23	0.28	0.07	0.54
Anxiety							1.09	0.30	0.03	0.34
Male	22	5.23	2.22	4.82	2.58	0.41	0.65	0.43	0.03	0.35
Female	18	7.33	3.16	6.11	3.05	1.22	4.19	0.06	0.20	0.99
Depression							2.21	0.15	0.05	0.48
Male	22	2.50	2.11	2.55	2.54	0.05	0.01	0.93	0.00	0.04
Female	18	2.56	1.98	1.67	1.37	0.89	8.12	0.01	0.32	1.38

.27) and anxiety (*d* = .20). Depression was slightly higher at the intake pretest in females at mean = 2.56 compared to 2.50 for the males; however, the females experienced a much larger decrease in depression by the end of the intervention (mean change of -.89 for females and .05 for males).

Likewise the females were lower in self-esteem at the intake but decreased the most postintervention with a mean change of .1.72 compared to 1.27 for the males. The females also started their outdoor experience with much higher levels of anxiety about their performance at mean 7.33 compared to 5.32 for the males, but the females experienced a larger decrease in anxiety with a mean change score of -1.22 vs. -.41 for the males.

Prior wilderness experience results. A comparison of a mean split in participants on their level of prior wilderness experience was hypothesized to impact their

improvements in the intervention outcomes. Prior wilderness experience comparison shown in Table 2.2 found a significant increase in self-esteem only for the low (p = .01) prior experience level participants with a medium effect size (d = .29), mean change = + 2.05. However, for all other outcomes the largest positive improvements were in the higher experience level participants. For instance, the high experience clients had a significant decrease in anxiety (p = .01, mean change – 1.45, d = .29). For some reason the high experience level participants started the outdoor experience higher in anxiety (pretest mean = 6.40 vs. 5.95 for low experience clients). Likewise the high experience participants had the only significant decrease in depression (p = .01, d = .30) whereas the low experience clients did not have any decrease in depression. Despite starting higher in self-efficacy (mean = 20.05) the high experience participants actually had a nonsignificant decrease in self-efficacy after the intervention compared to a nonsignificant increase in the low experience clients (p. = .66 and .70).

The effect sizes for the intervention were medium size for reducing depression (d = .30) and anxiety (d = .29) but only in the high experience level clients. The most interesting outcome of this analysis was that clients with higher levels of experience self-reported higher levels of anxiety at the pretest (mean = 6.40 vs. 5.95) and improved the most (mean change = -1.45 vs. -.10). The effect size for increasing self-esteem was d = .29 for the lower experience clients which is medium size. However, there was a small effect size improvement also of d = .11 in the higher experience level clients.

Table 2.2: Prior Wilderness Experience Pre- to Posttest Outcomes

Scale Name	Sample	Pre-Test	*SD*	Post-Test	*SD*	Change	*F*	sig	Effect Size d	ES d'
Self-Esteem							1.47	0.23	0.04	0.39
Low experience	20	19.85	3.70	21.90	3.60	2.05	7.79	0.01	0.29	1.28
High experience	20	21.05	4.29	21.95	4.25	0.90	7.79	0.15	0.11	.69
Self-Efficacy							0.33	0.57	0.01	0.19
Low experience	20	17.50	5.21	18.05	6.22	0.55	0.16	0.70	0.01	0.18
High experience	20	20.05	5.24	19.65	5.91	0.40	0.20	0.66	0.01	0.20
Anxiety							3.20	0.08	0.08	0.58
Low experience	20	5.95	2.72	5.85	2.54	0.10	0.03	0.86	0.00	0.08
High experience	20	6.40	3.03	4.95	3.10	1.45	7.76	0.01	0.29	1.28
Depression							1.41	0.24	0.04	0.39
Low experience	20	2.60	2.14	2.60	2.52	0.00	0.00	1.00	0.00	0.00
High experience	20	2.45	1.96	1.70	1.56	0.75	0.00	0.01	.30	1.32

Fitness level by intervention interaction outcomes. A subgroup analysis by fitness level of the participants shown in Table 2.3 revealed significant outcomes only for self-esteem in both low (p = .05) and higher levels (p = .04) of fitness. The effect sizes were small for the low fitness level clients (d = .18), but medium size in the higher level of fitness clients (d = .22). The high fitness level clients had higher pretest self-esteem (mean = 21.74) compared to mean = 19.29 for the lower fitness level clients. Marginal significance was found for clients with lower (p = .06) levels of fitness for improvements in anxiety, but not with high (p = .35) levels of fitness. Both self-efficacy (low p = .22, high p = .26) and depression (low p = .23, high p = .67) did not yield positive significance compared with a participant's fitness level.

Table 2.3: Fitness Level Pre- to Posttest Outcomes

Scale Name	Sample	Pre-Test	*SD*	Post-Test	*SD*	Change	*F*	sig	Partial Eta Squared	effect size
Self-Esteem							0.01	0.92	0.00	0.03
Low Fitness Level	21	19.29	3.58	20.71	3.49	1.43	4.26	0.05	0.18	0.92
High Fitness Level	19	21.74	4.13	23.26	3.94	1.53	5.15	0.04	0.22	1.07
Self-Efficacy							2.93	0.10	0.07	0.56
Low Fitness Level	21	17.38	4.54	18.76	4.93	1.38	1.61	0.22	0.07	0.57
High Fitness Level	19	20.32	5.78	18.95	7.21	1.37	1.34	0.26	0.07	0.55
Anxiety							0.12	0.73	0.00	0.11
Low Fitness Level	21	6.81	2.73	5.90	3.08	0.90	4.01	0.06	0.17	0.90
High Fitness Level	19	5.47	2.89	4.84	2.50	0.63	0.92	0.35	0.05	0.45
Depression							0.24	0.63	0.01	0.16
Low Fitness Level	21	3.00	2.12	2.48	2.04	0.52	1.53	0.23	0.07	0.55
High Fitness Level	19	2.00	1.83	1.79	2.20	0.21	0.19	0.67	0.01	0.20

Conclusion

The results indicate that a guided wilderness experience that makes use of the theoretical framework of the self-efficacy theory can be used as a method for improving client's self-esteem, anxiety and depression in participants, but not self-efficacy. The scale used for measuring self-efficacy was not a standardized scale and thus may not have been effective in measuring wilderness experience improvements. Improvements were largest for females compared to males in self-esteem, anxiety and depression. A male's self-esteem may improve but only marginally significant results existed in this study specific to this. Self-esteem was improved for clients with both low and high levels of prior wilderness experience and also clients with both low and high levels of fitness. Females also showed significant improvements in depression and slightly significant

improvements in anxiety. High experience clients also improved in anxiety and depression.

The results of this study can help wilderness guides to design improved wilderness program to better benefit their clients. Understanding the constructs of the self-efficacy theory can aid them in their day plans specific to the activity their pursing as measureable results pertaining to its validity in this context are presence in this study.

A larger sample size would likely have provided more significance outcomes because many of the effect sizes are medium size. This study helps to provide the structure and start for potential future research concerning the relationship between the self-efficacy theory and wilderness programs.

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CHAPTER 3

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to examine the impact of an experiential wilderness guided program as part of the University of Utah's Department of Parks, Recreation & Tourism's outdoor courses on improvements in self esteem, self-efficacy, anxiety and depression. This research was needed because of the limited research on this type of activity.

This study utilized the self-efficacy theory as the supporting framework for the overall structure and implementation of the intervention. Self-efficacy has been defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Bandura, 2001). When an individual is taught a new skill or given the opportunity to attempt a new task, they possess a level of self-efficacy. Their current belief is limited by factors such as prior experience, associated fears, unknown information, etc. Health educators have found that by breaking a new skill or tasks into smaller steps, increased success is generated (Glanz, 2002). By simplifying each step and allowing for more repetitions of practice, an individual is able to build more self-efficacy about performing each step. Additionally, the facilitator or health educator is able to provide positive reinforcement and perform additional role modeling which also aids in increasing the individuals self-efficacy. Similar situation exists among professional outdoor guides and their clients.

The evaluation design proposed for this study was a 2 x 2 quasi-experimental design with repeated measures including a pretest and posttest. There was no control group associated with this study and random assignment of the 40 enrolled participants did not take place. Rather students registered for activities based on a first come first

serve basis as sorted by the University's registrar's office. However, posthoc statistical comparisons were made to compare multiple subgroups to answer the question of, "For which types of clients was the program most beneficial?" The research sought to determine if there were any differences in outcomes by gender, prior experience in wilderness activities, and fitness levels. This type of analysis also created comparison groups that make the study a quasi-experimental study rather than a nonexperimental study and controlled for more threats to internal validity.

Data were gathered from self-administered surveys provided to students participating in academic rock and ice climbing courses (N = 40) during the time period of July 1, 2009 to February 28, 2010. Significant results were produced showing a correlation between the guided wilderness experiences and improving a client's self-esteem among all three demographic traits.

Conclusions

The results indicated that a guided wilderness experience that makes use of the theoretical framework of the self-efficacy theory can be used as a method for improving clients' self-esteem, anxiety and depression specifically for females. Ironically self-efficacy did not improve significantly in either the males or the females, but this could have been the result of the researchers using nonstandardized testing scales because none specific to wilderness experience self-efficacy could be located.

A male's self-esteem may improve but only marginally significant results existed in this study specific to this. Self-esteem was improved for clients with both low and high levels of prior wilderness experience and also clients with both low and high levels of

fitness. Females also showed significant improvements in depression and slightly significant improvements in anxiety.

Applications

In the profession of wilderness guiding, client care is of the highest importance. Many responsibilities exist for the guide including, but not limited to, judgment, decision making, risk management, role modeling and client comfort. The results of this study can help wilderness guides to better their client care. Understanding and implementing the constructs of the self-efficacy theory may aid wilderness guides in their daily responsibilities specific to the activity they're pursing as measureable results pertaining to its validity in this context are presence in this study.

Client care is improved when a client's self-esteem, self-efficacy, anxiety, and depression all improve. In this study, it was determined that significant changes tend to occur more in females than for males and in those with higher levels of prior wilderness experience. The outcomes are of medium size, indicating that encouragement of women's participation in outdoor wilderness experiences can be a positive mental health pursuit and should be added to treatment programs for depression and anxiety for women. One cannot assume that only those with low levels of prior wilderness experience will experience these benefits. For some unknown reason, participants with higher prior levels of experience experienced higher anxiety at the beginning of the wilderness experience, but improved the most in reduced anxiety as they learned the competencies and skills to be successful. Possibly these larger improvements in anxiety and depression in the higher experience level participants were due to increased resilience stemming from prior stress

coping experiences with the wilderness. This could have been a reason for their interest in signing up for another wilderness experience. Their higher anxiety could also be attributed to performance anxiety similar to that cultivated in elite athletes that lead to greater performance scores.

Limitations of the Study

Despite the limitations in internal and external validity of the study design discussed in Chapter 1, this study did control for many threats to validity. Concerning external validity, this study focused on rock and ice climbing activities and thus may not transfer or generalize to other outdoor activities. If properly adjusted and applied, the self-efficacy theory may prove a valid method for improving a client's mental status in other wilderness guided opportunities.

Wilderness guides specific to rock and ice climbing may want to consider the use of the self-efficacy theory when pursing their daily routine. An example of this could include a discussion and consideration of how to teach climbing movement. A guide could role model or demonstrate a movement progression to their client, then verbally coach or encourage them as they tried it for themselves. If when practicing the movements the client became frustrated or upset, the guide could climb beside them and help minimize the increase in the client's emotional arousal. Rock and ice climbing are known for their extreme nature and the risk associated. Because of this, clients may display negative qualities associated with their mental fitness such as decreased self esteem or increased anxiety and depression. Wilderness guides use different tools to

maintain a high level of client care. As shown with this study, the constructs of the self-efficacy theory could provide additional assistance in achieving such a level.

Future Research and Innovations

A larger sample size in this study might have provided more significance to the results overall. An extension to the time period associated might have allowed the larger sample size. The age range also subtracted from the sample size and contributed to the study's limitations.

This study was specific such that it focused on wilderness guides for the activities of rock and ice climbing from the University of Utah. Wilderness guides exist for many different activities and programs. Some are technical such as whitewater rafting and canyoneering. Others are therapeutic such as wilderness therapy type programs. Many focus on outdoor education such as programs run through the National Outdoor Leadership School and Outward Bound. Possibilities involving the application of different health belief theories as a method for improving a client or students mental state exist for all of these wilderness driven opportunities. Additionally, application of these theories could assist the guides in achieving similar improvements.

Use of different health belief theories combined with outdoor recreation may also provide an avenue for improvements in physical health. Possibilities exist with multiple populations including those that participate in guided wilderness recreation and also members of the general public. Physically related conditions such as obesity may be improved by participating in group walks at a local park or going for a hike in the

mountains with your significant other. Opportunities for research exist relating health belief theories, outdoor recreation, and improvements in physical fitness.

Outdoor recreation could prove to be a valid contributor to prehospital preventative health care. If combined with a health belief theory, mental and physical benefits could exist for those who participate. Continued research in this interest area may prove justifiable and beneficial for many societies throughout the world.

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APPENDIX A

A STUDY COVER LETTER

Hello!

This brief is to present and describe an opportunity for your involvement in a research study present at the University of Utah conducted by Nathan Smith, a graduate student within the Health, Promotion & Education Department.

The title of this study is, "Effectiveness of a Guided Wilderness Experience on Improved Client Self-Efficacy, Self Esteem, Anxiety, and Depression." The purpose of this study is to examine the impact of an experiential wilderness guided program as part of the University of Utah's Outdoor Recreation Programs trips & outings and also the University of Utah's Department of Parks, Recreation & Tourism's outdoor courses on improvements in self-efficacy, self-esteem, anxiety and depression.

Attached is a consent document which describes this study in more detail. When considering your participation in this study, it is important to thoroughly read this document and understand its multiple components. Your informed consent is necessary for participation.

To help ensure confidentiality throughout the study, a personal identification number is assigned to you. This number is to be placed on the demographics questioner and all tests.

YOUR PERSONAL IDENTIFICATION NUMBER: ###

I appreciate your consideration of this study and efforts relating to it.

Thank you,

Nathan Smith
Principal Investigator

APPENDIX B

STUDY CONSENT FORM

Consent Document

BACKGROUND

You have been invited to participate in a research study to evaluate the effectiveness of guided outdoor recreation on increasing self-esteem and decreasing anxiety and depression. Before you decide if you will participate in this study, it is important for you to understand why the research is being done and what the study will involve.

The purpose of the research is to increase your self-esteem and decrease your overall anxiety and depression levels through participation in guided outdoor endeavors. Professional outdoor guides provide opportunities for their clients not typical when compared to other forms of recreation. Many guides believe that guided outdoor recreational pursuits may provide a measurable benefit for their clients when relating self-esteem, anxiety, and depression levels.

The intervention specific to this study will include an outdoor intervention hosted through the University of Utah's Outdoor Recreation Program or Department of Parks, Recreation & Tourism. Transportation may or may not be included with this intervention.

The study is being conducted by Nathan Smith, a graduate student in Health Promotion and Education at the University of Utah.

STUDY PROCEDURES

You will be asked to:

- Answer a questionnaire before the intervention. The questionnaire will focus on demographics.
- Attend a logistical planning meeting with all participants and guides for the outing. During this meeting the travel and outdoor itineraries will be finalized. Also expectations and details of the outing will be discussed. All participants will be considered clients and assigned to specific guides for the remainder of the study.
- Participate in an intervention that will include travel by car roundtrip and outdoor activities. At the beginning of this intervention a pretest will need to be completed. A posttest will be expected at the conclusion of the intervention. A 3 and 6 month follow-up test will also be expected.

RISKS

The expected risks with participating in this study are moderate. Objective hazards do exist while recreating outdoors. Your assigned guide will work to minimize and manage these risks to the best of their ability. Some factors are uncontrollable such as weather. It is possible that conditions might be less than ideal at times. You will not be required to progress beyond your comfort level while outside. If necessary a guide will accompany you back to the vehicle. Possible risks may include, but are not limited to, physical and emotional discomfort. As with any type of increased physical activity you could experience soft tissue, joint, or bone injury, and increased heart rate, dizziness, or shortness of breath. The self-report tests may cause mental frustration or anxiety.

BENEFITS
The potential benefits include helping researchers to learn if guided outdoor activities can aid in the increase of an individual's self-esteem and decrease in anxiety and depression. We cannot guarantee any direct benefits.

ALTERNATIVE PROCEDURES
There are no alternative procedures for this study.

CONFIDENTIALITY
Names of participants will not be written on the questionnaire or tests completed during this study. Instead, a code number will be given to you to write on each completed testing measure. In case you forget your assigned code, the principal investigator will keep a list that will match your name to the code. The list will be kept in a locked file cabinet or on a password-protected computer, and only authorized members of the study team will be able to access it. The list will be destroyed at the end of the study. Results of the study may be published; however, your name and other identifying information will be kept private. Everything will be done to keep your records private, but this cannot be guaranteed.

PERSON TO CONTACT
If you have questions, complaints or concerns about this study, or if you think you may have been injured from being in this study, you can contact Nathan Smith on his personal cell phone (801) 674-9322 at any time.

RESEARCH PARTICIPANT ADVOCATE
You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

INSTITUTIONAL REVIEW BOARD
Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

VOLUNTARY PARTICIPATION
It is your choice to decide your participation in this study. Refusal to participate or the decision to withdraw from this research will involve no penalty or loss of benefits to which you are otherwise entitled. This will not affect your relationship with the investigator.

COSTS AND COMPENSATION TO PARTICIPANTS
No fees are associated with this study directly. There is no compensation at the conclusion of this study. After full completion of all 4 testing measures (pretest, posttest, 3 and 6 month follow up) a participant will be entered into a lottery for a trip credit allowance of $100.00 with the University of Utah Outdoor Recreation Program during the regular school semesters (Fall or Spring).

NUMBER OF PARTICIPANTS
An estimated 60 adults from the University of Utah will participate in this study.

CONSENT:

By signing this consent form, I confirm I have read this permission document and have had the opportunity to ask questions. I will be given a signed copy of this permission document. I voluntarily agree to have myself take part in this study.

_____
Participant's Name

_____ _____
Participant's Signature Date

_____
Name of Researcher or Staff

_____ _____
Signature of Researcher or Staff Date

APPENDIX C

STUDY DEOMOGRAPHIC QUESTIONNAIRE

Demographics Questionnaire

Please fill out the following information about you:

Personal Identification Number:_____ Today's Date: _____

Chosen Activity: _____

Age (yrs): _____ Height (ft/in): _____ Weight (lbs): _____

What is your gender? (circle one)

A. Male
B. Female

What is your material status? (circle one)

A. Married
B. Single
C. Divorced

How many children do you have: _____sons _____daughters

What is your primary language?

A. English C. Hawaiian E. Tongan
B. Spanish D. Chinese F. Other Language: _____

Primary Ethnicity? (circle one)

A. Caucasian/White, not Hispanic
B. African American
C. Hispanic
D. Asian
E. Pacific Islander
F. Native American
G. Other:_____

Secondary Ethnicity? (circle one)

A. Caucasian/White, not Hispanic
B. African American
C. Hispanic
D. Asian
E. Pacific Islander
F. Native American
G. Other:_____

Highest education level? (circle one)

A. Some high school
B. High school/GED graduate
C. Some college
D. College degree
E. Some postgraduate schooling
F. Postgraduate degree

Average family yearly income? (circle one)

A. $0-$14,999
B. $15,000-$29,999
C. $30,000-$44,999
D. $45,000-$59,999
E. $60,000-$74,999
F. $75,000-$99,999
G. $100,000 and above

On how many days in the past 2 years have you participated in the following outdoor activities? (circle all that apply)

A. ____ days Rock Climbing/Mountaineering
B. ____ days Camping
C. ____ days Backpacking
D. ____ days Whitewater Rafting/ Kayaking
E. ____ days Day Hiking
F. ____ days (other outdoor activity--specify: _____

How would you rate your physical fitness? (circle one)

A. Not fit
B. Somewhat fit
C. Fit
D. Very fit
E. Extremely fit

APPENDIX D

STUDY PRETEST

OUTDOOR ACTIVITY PRETEST

Personal Identification Number _____

Instructions – Section 1

Please complete this 1st section using the following scale:

SA = Strongly Agree
A = *Agree*
D = *Disagree*
SD = *Strongly Disagree*

Section 1

	SA	A	D	SD
On the whole, I am satisfied with myself	☐	☐	☐	☐
At times, I think I am no good at all.	☐	☐	☐	☐
I am able to do things as well as most other people	☐	☐	☐	☐
I feel I do not have much to be proud of.	☐	☐	☐	☐
I certainly feel useless at times.	☐	☐	☐	☐
I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐
I wish I could have more respect for myself.	☐	☐	☐	☐
All in all, I am inclined to feel that I am a failure.	☐	☐	☐	☐
I take a positive attitude toward myself.	☐	☐	☐	☐

Instructions – Section 2

Please complete this 2nd section using the following scale:

1 = Strongly Disagree
2 = *Disagree*
3 = *Agree*
4 = *Strongly Agree*

Section 2

	1	2	3	4
I feel confident in my abilities to prepare for an outdoor activity.	☐	☐	☐	☐
I have the skill to complete most outdoor pursuits that I attempt.	☐	☐	☐	☐
I have the mental fortitude and strength to successfully complete an outdoor activity.	☐	☐	☐	☐
My health would not prevent me from successfully completing an outdoor activity.	☐	☐	☐	☐
I have strong confidence in the technical equipment used during outdoor activities.	☐	☐	☐	☐
I feel confident and secure with my guides ability.	☐	☐	☐	☐

Instructions – Section 3

Please choose one response from the four given for each question. You are encouraged to mark your immediate response to each question rather than spending too long on any of them.

Section 3

I feel tense or 'wound up':
A. Most of the time
B. A lot of the time
C. From time to time, occasionally
D. Not at all

I get sort of frightened feeling as if something awful is about to happen:
A. Very definitely and quite badly
B. Yes, but not too badly
C. A little, but it doesn't worry me
D. Not at all

Worry thoughts go through my mind:
A. A great deal of the time
B. A lot of the time
C. From time to time, but not too often
D. Only occasionally

I can sit at ease and feel relaxed:
A. Definitely
B. Usually
C. Not often
D. Not at all

I get a sort of frightened feeling like butterflies in the stomach:
A. Not at all
B. Occasionally
C. Quite often
D. Very often

I feel restless as I have to be on the move:
A. Very much indeed
B. Quite a lot
C. Not very much
D. Not at all

I get sudden feelings of panic:
A. Very often indeed
B. Quite often
C. Not very often
D. Not at all

I still enjoy the things I used to enjoy:
A. Definitely as much
B. Not quite so much
C. Only a little
D. Hardly at all

I can laugh and see the funny side of things:
A. As much as I always could
B. Not quite so much now
C. Definitely not so much now
D. Not at all

I feel cheerful:
A. Not at all
B. Not often
C. Sometimes
D. Most of the time

I feel as if I am slowed down:
A. Nearly all the time
B. Very often
C. Sometimes
D. Not at all

I have lost interest in my appearance:
A. Definitely
B. I don't take as much care as I should
C. I may not take quite as much care
D. I take just as much care as ever

I look forward with enjoyment to things:
A. As much as I ever did
B. Rather less than I used to
C. Definitely less than I used to
D. Hardly at all

I can enjoy a good book or radio or TV program:
A. Often
B. Sometimes
C. Not often
D. Very seldom

APPENDIX E

STUDY POSTTEST

OUTDOOR ACTIVITY POSTTEST

Personal Identification Number _____

Instructions – Section 1

Please complete this 1st section using the following scale:

SA = Strongly Agree
A = *Agree*
D = *Disagree*
SD = *Strongly Disagree*

Section 1

	SA	A	D	SD
On the whole, I am satisfied with myself	☐	☐	☐	☐
At times, I think I am no good at all.	☐	☐	☐	☐
I am able to do things as well as most other people	☐	☐	☐	☐
I feel I do not have much to be proud of.	☐	☐	☐	☐
I certainly feel useless at times.	☐	☐	☐	☐
I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐
I wish I could have more respect for myself.	☐	☐	☐	☐
All in all, I am inclined to feel that I am a failure.	☐	☐	☐	☐
I take a positive attitude toward myself.	☐	☐	☐	☐

Instructions – Section 2

Please complete this 2nd section using the following scale:

1 = Strongly Disagree
2 = *Disagree*
3 = *Agree*
4 = *Strongly Agree*

Section 2

	1	2	3	4
I feel confident in my abilities to prepare for an outdoor activity.	☐	☐	☐	☐
I have the skill to complete most outdoor pursuits that I attempt.	☐	☐	☐	☐
I have the mental fortitude and strength to successfully complete an outdoor activity.	☐	☐	☐	☐
My health would not prevent me from successfully completing an outdoor activity.	☐	☐	☐	☐
I have strong confidence in the technical equipment used during outdoor activities.	☐	☐	☐	☐
I feel confident and secure with my guides ability.	☐	☐	☐	☐

Instructions – Section 3

Please choose one response from the four given for each question. You are encouraged to mark your immediate response to each question rather than spending too long on any of them.

Section 3

I feel tense or 'wound up':
- E. Most of the time
- F. A lot of the time
- G. From time to time, occasionally
- H. Not at all

I get sort of frightened feeling as if something awful is about to happen:
- E. Very definitely and quite badly
- F. Yes, but not too badly
- G. A little, but it doesn't worry me
- H. Not at all

Worry thoughts go through my mind:
- E. A great deal of the time
- F. A lot of the time
- G. From time to time, but not too often
- H. Only occasionally

I can sit at ease and feel relaxed:
- E. Definitely
- F. Usually
- G. Not often
- H. Not at all

I get a sort of frightened feeling like butterflies in the stomach:
- E. Not at all
- F. Occasionally
- G. Quite often
- H. Very often

I feel restless as I have to be on the move:
- E. Very much indeed
- F. Quite a lot
- G. Not very much
- H. Not at all

I get sudden feelings of panic:
- E. Very often indeed
- F. Quite often
- G. Not very often
- H. Not at all

I still enjoy the things I used to enjoy:
- E. Definitely as much
- F. Not quite so much
- G. Only a little
- H. Hardly at all

I can laugh and see the funny side of things:
- E. As much as I always could
- F. Not quite so much now
- G. Definitely not so much now
- H. Not at all

I feel cheerful:
- E. Not at all
- F. Not often
- G. Sometimes
- H. Most of the time

I feel as if I am slowed down:
- E. Nearly all the time
- F. Very often
- G. Sometimes
- H. Not at all

I have lost interest in my appearance:
- E. Definitely
- F. I don't take as much care as I should
- G. I may not take quite as much care
- H. I take just as much care as ever

I look forward with enjoyment to things:
- E. As much as I ever did
- F. Rather less than I used to
- G. Definitely less than I used to
- H. Hardly at all

I can enjoy a good book or radio or TV program:
- E. Often
- F. Sometimes
- G. Not often
- H. Very seldom